

WHAT IS CLAIMED IS:

1 1. A computer system comprising:
2 a computational resource;
3 a storage system; and
4 a communication link connecting said computational resource and said storage
5 system; wherein said computational resource establishes communications with said storage
6 system using said communication link; and
7 wherein said storage system allocates resources to said computational resource
8 based upon a data rate capability of said storage resources and a data rate capability of said
9 communication link.

1 2. The system of claim 1, wherein said computational resource is a host
2 system.

1 3. The system of claim 1, wherein said computational resource is a
2 second storage system.

1 4. The system of claim 1, wherein said storage system allocates storage
2 resources to said computational resource based upon a data rate capability of said storage
3 resources and a data rate capability of said communication link.

1 5. The system of claim 4, wherein said communication link provides a
2 guaranteed quality of service (QoS) communication.

1 6. The system of claim 5, wherein said guaranteed quality of service
2 (QoS) communication comprises a guaranteed data rate; and wherein said storage system
3 allocates storage resources based upon said guaranteed data rate.

1 7. The system of claim 6, wherein said guaranteed quality of service
2 (QoS) communication comprises a guaranteed bandwidth; and wherein said storage system
3 allocates storage resources based upon said guaranteed bandwidth.

1 8. The system of claim 1, wherein said storage system allocates data path
2 resources to said computational resource based upon a data rate capability of said storage
3 resources and a data rate capability of said communication link.

1 9. The system of claim 8, wherein said communication link provides a
2 guaranteed quality of service (QoS) communication.

1 10. The system of claim 9, wherein said guaranteed quality of service
2 (QoS) communication comprises a guaranteed data rate; and wherein said storage system
3 allocates data path resources based upon said guaranteed data rate.

1 11. The system of claim 10, wherein said guaranteed quality of service
2 (QoS) communication comprises a guaranteed bandwidth; and wherein said storage system
3 allocates data path resources based upon said guaranteed bandwidth.

1 12 An apparatus comprising:
2 a processor;
3 a storage; and
4 a network connection, operable to connect said apparatus at a guaranteed
5 quality of service (QoS); and
6 wherein said processor establishes a data path between said storage and said
7 network connection; said data path being assigned a sufficient data speed to accommodate
8 said guaranteed quality of service.

1 13. The apparatus of claim 12, wherein said network connection comprises
2 Asynchronous Transfer Mode (ATM).

1 14. The apparatus of claim 12, wherein said network connection comprises
2 Integrated Services Digital Network (ISDN).

1 15. The apparatus of claim 12, wherein said network connection comprises
2 Digital Subscriber Line network (DSL).

1 16. The apparatus of claim 12, wherein said network connection comprises
2 Resource Reservation Protocol (RSVP).

1 17 A method for allocating resources in a storage system, said storage
2 system comprising a storage and a network connection, said method comprising:

3 establishing a data path between said storage and said network connection;
4 said data path being assigned a sufficient data speed based upon a data capacity of said
5 storage and a data rate capability of said network connection; and
6 allocating said storage based upon a data capacity of said storage and a data
7 rate capability of said network connection.

1 18. The method of claim 17, wherein said network connection provides a
2 guaranteed quality of service (QoS) communication, wherein establishing said data path
3 comprises assigning a data path having a sufficient data speed to accommodate said
4 guaranteed quality of service.

1 19. The method of claim 17, wherein said network connection provides a
2 guaranteed quality of service (QoS) communication, wherein allocating storage comprises
3 allocating storage having a sufficient data capacity to accommodate said guaranteed data rate.

1 20. The method of claim 17, wherein said establishing a data path
2 comprises:
3 searching for unallocated data communications resources to accommodate a
4 data capacity of said storage.

1 21. The method of claim 17, wherein said allocating storage comprises:
2 searching for unallocated storage having a sufficient data capacity to match a
3 data rate capability of said network connection.